



LIEBHERR

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL



Machine Id
LIEBHERR LH-50 083207-1203
Component
Swing Drive
Fluid
KLONDIKE FULL SYNTHETIC 75W90 (9 LTR)

RECOMMENDATION

We advise that you check for the source of water entry. The oil change at the time of sampling has been noted. Confirm the source of the lubricant being utilized for top-up/fill. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LH0281215	LH0260590	LH0213851
Sample Date		Client Info		12 Mar 2024	08 Jul 2023	11 Apr 2023
Machine Age	hrs	Client Info		19953	18266	17583
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				ABNORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>1450	466	699	463
Chromium	ppm	ASTM D5185(m)	>11	5	9	6
Nickel	ppm	ASTM D5185(m)	>3	<1	<1	<1
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)		0	0	0
Aluminum	ppm	ASTM D5185(m)	>4	0	<1	<1
Lead	ppm	ASTM D5185(m)	>4	<1	1	<1
Copper	ppm	ASTM D5185(m)	>542	52	30	19
Tin	ppm	ASTM D5185(m)	>38	0	0	0
Vanadium	ppm	ASTM D5185(m)		0	0	0
White Metal	scalar	Visual*	NONE	NONE	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	NONE

CONTAMINATION

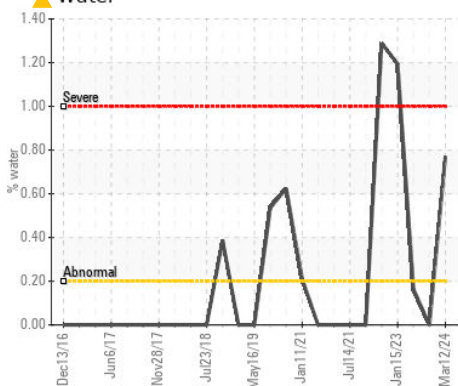
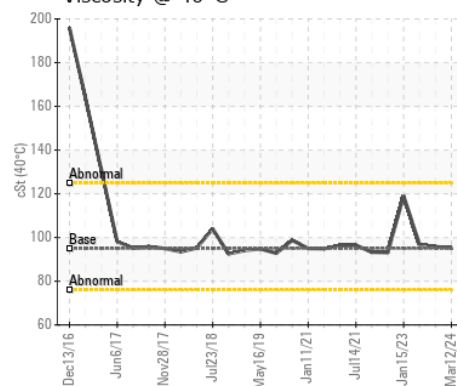
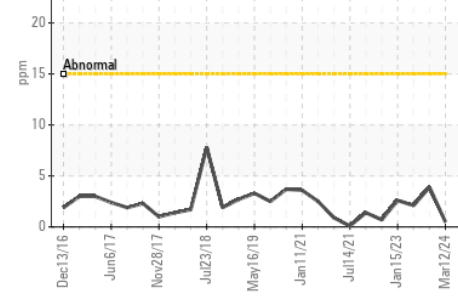
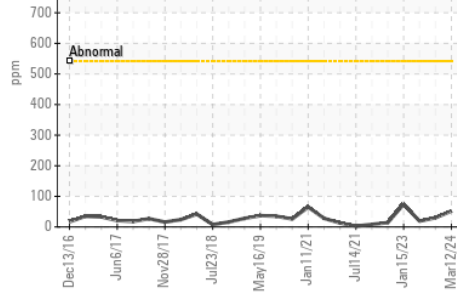
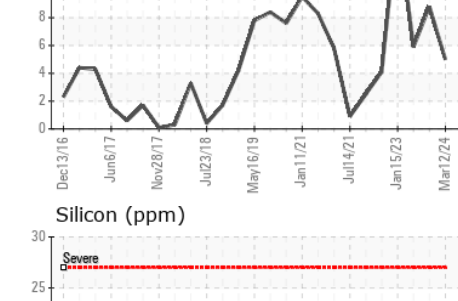
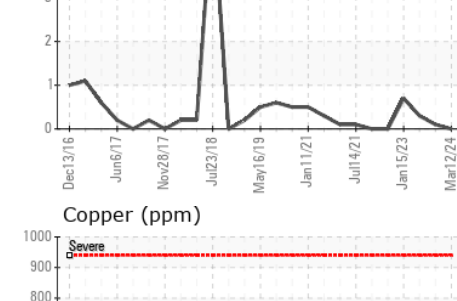
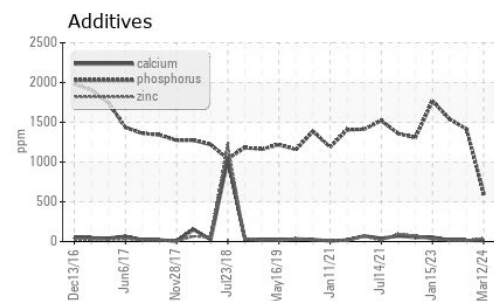
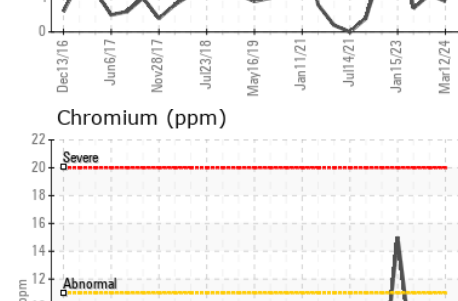
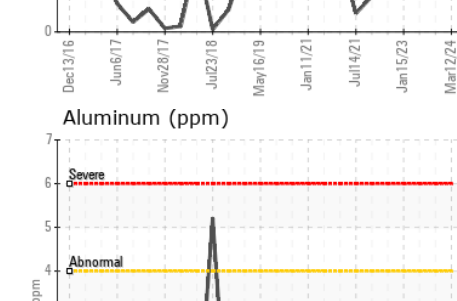
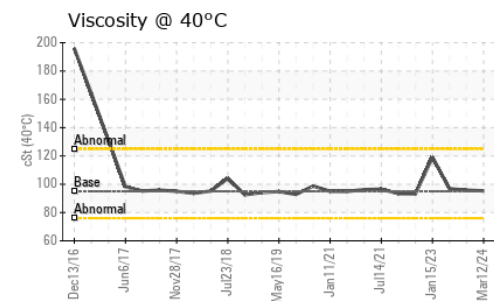
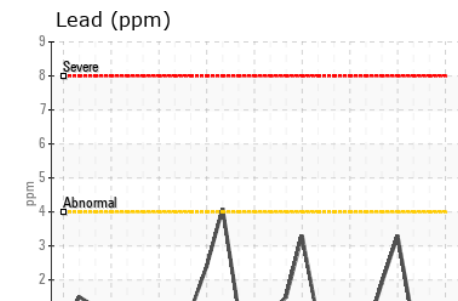
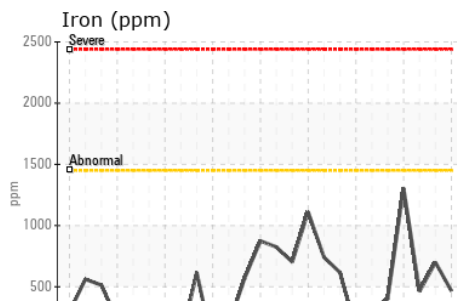
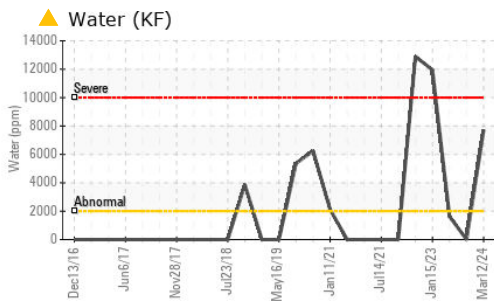
There is a moderate concentration of water present in the oil.

Silicon	ppm	ASTM D5185(m)	>15	<1	4	2
Potassium	ppm	ASTM D5185(m)	>20	<1	<1	0
Water	%	ASTM D6304*	>0.2	▲ 0.770	---	0.163
ppm Water	ppm	ASTM D6304*	>2000	▲ 7706	---	1630.7
Silt	scalar	Visual*	NONE	MODER	NONE	VLITE
Debris	scalar	Visual*	NONE	NONE	NONE	VLITE
Sand/Dirt	scalar	Visual*	NONE	LIGHT	NONE	NONE
Appearance	scalar	Visual*	NORML	NORML	NORML	NORML
Odor	scalar	Visual*	NORML	NORML	NORML	NORML
Emulsified Water	scalar	Visual*	>0.2	▲ .2%	NEG	.2%

FLUID CONDITION

Additive levels indicate the addition of a different brand, or type of oil. The oil is no longer serviceable due to the presence of contaminants.

Sodium	ppm	ASTM D5185(m)		<1	<1	<1
Boron	ppm	ASTM D5185(m)		34	68	77
Barium	ppm	ASTM D5185(m)		0	0	0
Molybdenum	ppm	ASTM D5185(m)		0	<1	0
Manganese	ppm	ASTM D5185(m)		2	6	3
Magnesium	ppm	ASTM D5185(m)		1	1	1
Calcium	ppm	ASTM D5185(m)		12	15	19
Phosphorus	ppm	ASTM D5185(m)		615	1414	1542
Zinc	ppm	ASTM D5185(m)		39	14	16
Sulfur	ppm	ASTM D5185(m)		15137	19858	21332
Visc @ 40°C	cSt	ASTM D7279(m)	95	95.3	95.8	96.8



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : LH0281215 **Received** : 27 Mar 2024
Lab Number : 02625024 **Tested** : 28 Mar 2024
Unique Number : 5750143 **Diagnosed** : 28 Mar 2024 - Kevin Marson
Test Package : MOB 1 (Additional Tests: KF)

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To discuss this sample report, contact Customer Service at 1-800-268-2131.
 Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab.
 Validity of results and interpretation are based on the sample and information as supplied.